



Pallet Stackers

L14 – L16 SP

Capacity 1.4 t – 1.6 t | Series 1177

PB ION H₂

Flexible lifting talent

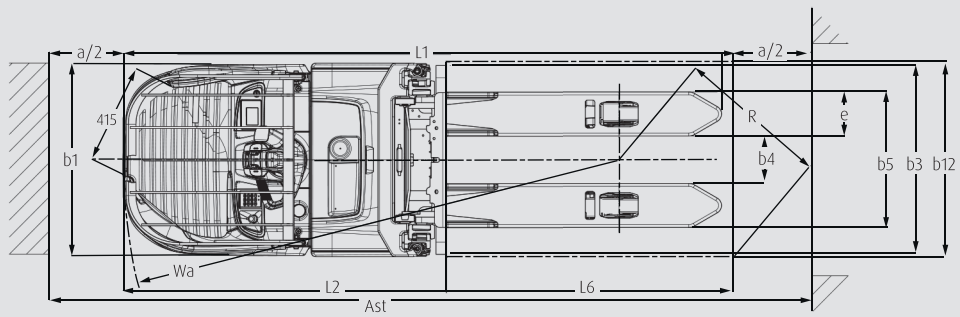
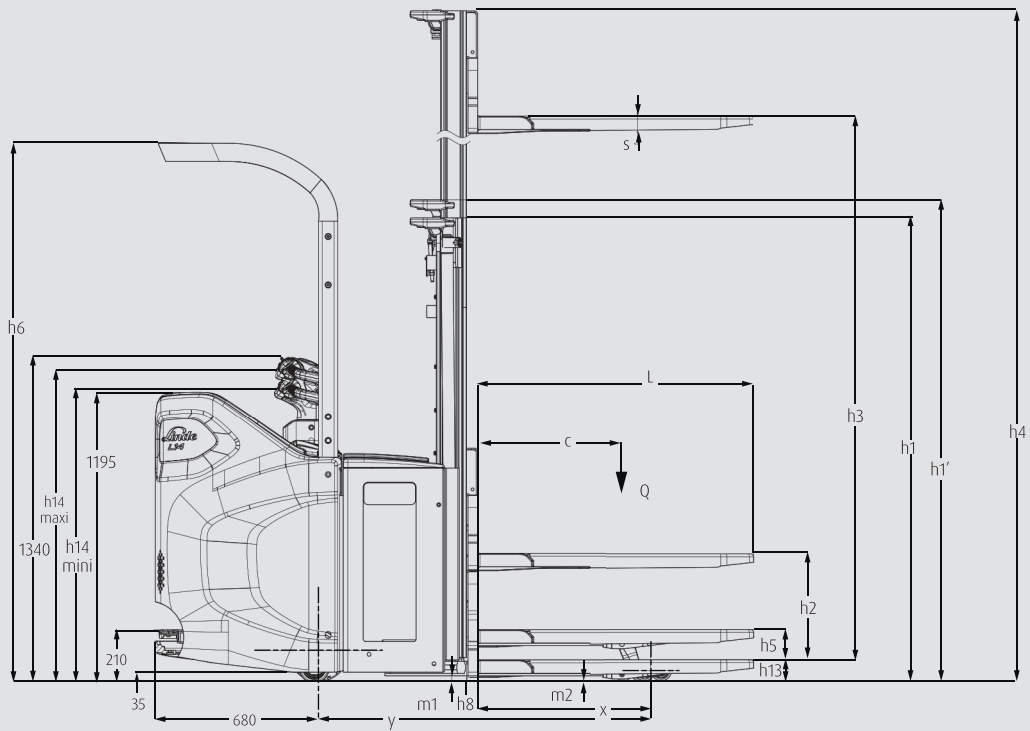
- Versatile pallet stacker for storage and retrieval at a height of up to 5.3 metres and for longer transport journeys
- Solid steel skirt around the standing platform for effective protection in case of collision
- Unique platform concept with standing position at 45° angle and Linde e-driver control for better all-round vision and an ergonomic posture
- Linde OptiLift assistance system for precise mast control and energy-efficient load handling
- Innovative castor wheel concept for maximum stability when storing and retrieving at height

TECHNICAL DATA (according to VDI 2198)

| Characteristics | 1.1 | Manufacturer (abbreviation) | | Linde MH | Linde MH |
|-----------------|--------|--|-----------------|--|--|
| | 1.2 | Manufacturer's type designation | | L14 SP | L16 SP |
| Weight | 1.2a | Series | | 1177-00 | 1177-00 |
| | 1.3 | Drive | | Battery | Battery |
| Tyres/chassis | 1.4 | Operation | | Stand on | Stand on |
| | 1.5 | Rated capacity/rated load | Q (t) | 1.4/(2.0) ¹⁾ | 1.6/(2.0) ¹⁾ |
| Dimensions | 1.6 | Load centre distance | c (mm) | 600 | 600 |
| | 1.8 | Load distance, centre of drive axle to fork | x (mm) | 654/724 ²⁾³⁾ | 654/724 ²⁾³⁾ |
| Performance | 1.9 | Wheelbase | y (mm) | 1316/1386 ²⁾³⁾ | 1316/1386 ²⁾³⁾ |
| | 2.1 | Service weight | kg | 1600 ³⁾⁶⁾ | 1600 ³⁾⁶⁾ |
| Electric-engine | 2.2 | Axle loading, laden front/rear | kg | 1237/1763 ³⁾⁶⁾ | 1246/1954 ³⁾⁶⁾ |
| | 2.3 | Axle loading, unladen front/rear | kg | 1180/420 ³⁾⁶⁾ | 1180/420 ³⁾⁶⁾ |
| Additional data | 3.1 | Tyres: solid rubber, superelastic, pneumatic, polyurethane | | Polyurethane | Polyurethane |
| | 3.2 | Tyre size, front | | Ø 254 × 102 | Ø 254 × 102 |
| Drive | 3.3 | Tyre size, rear | | Ø 85 × 85 (2x Ø 85 × 60) ⁷⁾ | Ø 85 × 85 (2x Ø 85 × 60) ⁷⁾ |
| | 3.4 | Additional wheels (dimensions) | | 2x Ø 140 × 50 | 2x Ø 140 × 50 |
| Performance | 3.5 | Wheels, number front/rear (x = driven wheels) | | 1x + 1/2 (1x + 1/4) ⁷⁾ | 1x + 1/2 (1x + 1/4) ⁷⁾ |
| | 3.6 | Tread, front | b10 (mm) | 491 ²⁾ | 491 ²⁾ |
| Electric-engine | 3.7 | Tread, rear | b11 (mm) | 380/500 ²⁾ | 380/500 ²⁾ |
| | 4.2 | Mast height, lowered | h1 (mm) | 2265 ²⁾ | 2265 ²⁾ |
| Additional data | 4.3 | Free lift | h2 (mm) | 1745 ²⁾ | 1745 ²⁾ |
| | 4.4 | Lift | h3 (mm) | 5316 ²⁾ | 5316 ²⁾ |
| Performance | 4.5 | Mast height, extended | h4 (mm) | 5836 ²⁾ | 5836 ²⁾ |
| | 4.6 | Initial lift | h5 (mm) | 115 ⁸⁾ | 115 ⁸⁾ |
| Electric-engine | 4.7 | Height of overhead guard (cabin) | h6 (mm) | 2224 ²⁾ | 2224 ²⁾ |
| | 4.9 | Height drawbar in driving position min./max. | h14 (mm) | 1207/1287 ²⁾ | 1149/1357 ²⁾ |
| Additional data | 4.10 | Height of wheel arms | h8 (mm) | 80 ⁹⁾ | 80 ⁹⁾ |
| | 4.15 | Height, lowered | h13 (mm) | 86 ⁹⁾ | 86 ⁹⁾ |
| Performance | 4.19 | Overall length | l1 (mm) | 2494 ²⁾ | 2467 ²⁾ |
| | 4.20 | Length to fork face | l2 (mm) | 1347 ²⁾ | 1347 ²⁾ |
| Electric-engine | 4.21 | Overall width | b1/b2 (mm) | 800 ²⁾ | 800 ²⁾ |
| | 4.22 | Fork dimensions DIN ISO 2331 | s/e/l (mm) | 71/180/1150 ¹⁰⁾ | 71/180/1150 ¹⁰⁾ |
| Additional data | 4.24 | Fork carriage width | b3 (mm) | 780 ²⁾ | 780 ²⁾ |
| | 4.25 | Fork spread | b5 (mm) | 560/680 ²⁾ | 560/680 ²⁾ |
| Performance | 4.26 | Distance between wheel arms/loading surfaces | b4 (mm) | 196/316 ²⁾ | 196/316 ²⁾ |
| | 4.31 | Ground clearance, laden, below mast | m1 (mm) | 135/20 ³⁾ | 135/20 ³⁾ |
| Electric-engine | 4.32 | Ground clearance, centre of wheelbase | m2 (mm) | 135/20 ³⁾ | 135/20 ³⁾ |
| | 4.34.1 | Aisle width for pallets 1000 × 1200 crossways | Ast (mm) | 2894/2931 ³⁾¹¹⁾ | 2894/2931 ³⁾¹¹⁾ |
| Additional data | 4.34.2 | Aisle width with pallet 800 × 1200 lengthways | Ast (mm) | 2878/2893 ³⁾¹¹⁾ | 2878/2893 ³⁾¹¹⁾ |
| | 4.35 | Turning radius | Wa (mm) | 2001/2071 ³⁾⁴⁾ | 2001/2071 ³⁾⁴⁾ |
| Performance | 5.1 | Travel speed, laden/unladen | km/h | 9.5/9.5 ²⁾ | 9.5/9.5 ²⁾ |
| | 5.2 | Lifting speed, laden/unladen | m/s | 0.19/0.32 (0.57/0.89) ⁶⁾¹³⁾ | 0.19/0.32 (0.57/0.89) ⁶⁾¹³⁾ |
| Additional data | 5.3 | Lowering speed, laden/unladen | m/s | 0.39/0.4 (0.68/0.72) ⁶⁾¹³⁾ | 0.39/0.4 (0.68/0.72) ⁶⁾¹³⁾ |
| | 5.8 | Max. gradeability, laden/unladen | % | 8.0/15.0 | 8.0/15.0 |
| Performance | 5.9 | Acceleration time, laden/unladen | s | 6.0/5.1 | 6.0/5.1 |
| | 5.10 | Service brake | | electric/mechanic | electric/mechanic |
| Electric-engine | 6.1 | Drive motor rating at S2 60 min | kW | 3 | 3 |
| | 6.2 | Lift motor rating at S3 15% | kW | 3.2 | 3.2 |
| Additional data | 6.3 | Battery according to DIN 43531/35/36 A,B,C,no | | 43 535 B/3PzS | 43 535 B/3PzS |
| | 6.4 | Battery voltage/nominal capacity (5h) | (V)/(Ah) o. kWh | 24/375 | 24/375 |
| Performance | 6.5 | Battery weight (±5%) | kg | 333 | 333 |
| | 6.6 | Energy consumption according to DIN EN 16796 | kWh/h | 0.97 | 1.09 |
| Additional data | 6.6.1 | CO2 equivalent according to EN 16796 | kg/h | 0.52 | 0.59 |
| | 6.7 | Turnover output according to VDI 2198 | t/h | 62.0 | 70.0 |
| Performance | 6.8 | Turnover efficiency according to VDI 2198 | t/kWh | 33 | 35 |
| | 8.1 | Type of drive unit | | AC control | AC control |
| Additional data | 10.7 | Sound pressure level LpAZ (at the operator's seat) | dB(A) | 67 | 67 |

- 1) (Load distribution, e.g. 1000 kg on the forks, 1000 kg on the fork arms, total load max. 2000 kg) (+5 mm)
- 2) (+5 mm)
- 3) Load arms upraised/lowered
- 4) -75 mm = 2 PzS vertical; ±0 mm = 3 PzS vertical or side change; +75 mm 4PzS side change
- 5) Figures with battery, see line 6.4/6.5. (±10%)
- 6) (±10%)
- 7) Figures in parenthesis with tandem load wheels (0/-5 mm) (0/+5 mm)
- 8) (0/-5 mm)
- 9) (0/+5 mm)
- 10) Reach legs 75 × 150 × 1115 mm including a 200 mm (min.) opening aisle clearance
- 11) (±10%)
- 12) (±5%)
- 13) Figures in parenthesis with initial lift

L14-L16 SP



MAST TABLES

STANDARD MAST (in mm)

| Lift | h3: 1844 | h3: 2344 | h3: 2844 | h3: 3244 | h3: 3744 | h3: 4144 | h3: 4644 |
|--|--|--|--|--|--|--|--|
| Height measurements | h1: 1415 h2: 150 h4: 2364 h1': 1490 | h1: 1665 h2: 150 h4: 2364 h1': 1740 | h1: 1915 h2: 150 h4: 3364 h1': 1990 | h1: 2115 h2: 150 h4: 3764 h1': 2190 | h1: 2365 h2: 150 h4: 4264 h1': 2440 | h1: 2565 h2: 150 h4: 4664 h1': 2640 | h1: 2815 h2: 150 h4: 5164 h1': 2890 |
| Manufacturer's type designation | | | | | | | |
| L14 SP | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| L16 SP | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |

DUPLEX MAST (in mm)

| Lift | h3: 1844 | h3: 2344 | h3: 2844 | h3: 3244 | h3: 3744 | h3: 4144 |
|--|-------------------------------------|--------------------------------------|--------------------------------------|--------------------------------------|--------------------------------------|--------------------------------------|
| Height measurements | h1: 1415 h2: 895 h4: 2364 h1': - | h1: 1665 h2: 1145 h4: 2864 h1': - | h1: 1915 h2: 1395 h4: 3364 h1': - | h1: 2115 h2: 1595 h4: 3764 h1': - | h1: 2365 h2: 1845 h4: 4264 h1': - | h1: 2565 h2: 2045 h4: 4664 h1': - |
| Manufacturer's type designation | | | | | | |
| L14 SP | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| L16 SP | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |

TRIPLEX MAST (in mm)

| Lift | h3: 3516 | h3: 4266 | h3: 4716 | h3: 5316 |
|--|--------------------------------------|--------------------------------------|--------------------------------------|--------------------------------------|
| Height measurements | h1: 1665 h2: 1145 h4: 4036 h1': - | h1: 1915 h2: 1395 h4: 4786 h1': - | h1: 2065 h2: 1542 h4: 5236 h1': - | h1: 2265 h2: 1745 h4: 5836 h1': - |
| Manufacturer's type designation | | | | |
| L14 SP | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| L16 SP | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |

h1: Height of mast, lowered

h2: Free lift

h3: Lift

h4: Height of mast, extended

h1': Height of mast, with initial lift (+75 mm)

Optional equipment

STANDARD AND OPTIONAL EQUIPMENT

| Manufacturer's type designation/equipment | | L14 SP | L16 SP |
|---|--|--------|--------|
| Safety | Automatic speed reduction when cornering | ● | ● |
| | Key switch | ● | ● |
| | Log in PIN code | ○ | ○ |
| | Unique, safe and intuitive 45° operating position | ● | ● |
| | Linde BlueSpot – optical warning signal for pedestrians and drivers | ○ | ○ |
| | Foot detection sensor – truck slows down or stops if operator's foot is detected outside of the platform contours | ○ | ○ |
| Service | CAN bus technology | ● | ● |
| Digitalisation | Data transmission online | | |
| | Data transmission Wifi | | |
| | Linde connect:desk – local fleet management with different functional modules | ○ | ○ |
| | Linde connect:cloud – fleet management as a service (hosted version) | ○ | ○ |
| | Linde Pre-Op Check App – individualisable daily check protocol for operational readiness | ○ | ○ |
| Operation/load handling | Initial lift | ○ | ○ |
| | Ultra-fast lifting | ○ | ○ |
| | Soft landing on forks | ○ | ○ |
| | Low speed if initial lift lowered | ○ | ○ |
| | Maximum operating speed limitation (8 or 10 km/h) | ○ | ○ |
| | Load backrest h = 1000 mm | ○ | ○ |
| | Overhead guard | ○ | ○ |
| Environment | Coldstore -35°C (in/out) – with grid or standard floor mat | ○ | ○ |
| Workplace | Fully suspended operator compartment – both feet platform and steering unit are suspended | ● | ● |
| | Padded leg rest and backrest | ● | ● |
| | Twin-grip handlebar | ● | ● |
| | Innovative Linde e-driver control perfectly suited for operation at a 45° angle in standing position | ○ | ○ |
| | Height adjustable steering unit | ○ | ○ |
| | Multi-function coloured display hour meter, maintenance indication, battery discharge indicator and internal fault code indication | ● | ● |
| | Accessory support | ○ | ○ |
| | Support for data terminal and power supply cable 24 V | ○ | ○ |
| | Scanner support and clipboard | ○ | ○ |
| | Electrical socket USB 5 V | ○ | ○ |
| Mast | Standard | ○ | ○ |
| | Duplex | ○ | ○ |
| | Triplex | ○ | ○ |
| | Mast protection: mesh | ○ | ○ |
| Attach-ment/forks | Width over fork carriage 560 mm with fork length 950 mm or 1150 mm | ○ | ○ |
| | Width over fork carriage 680 mm with fork length 1150 mm | ○ | ○ |
| Axles and tyres | Drive wheel heavy duty, polyurethane non-marking | ● | ● |
| | Drive wheel high grip, polyurethane non-marking | ○ | ○ |
| | Drive wheel rubber | ○ | ○ |
| | Single load wheel, polyurethane | ● | ● |
| | Tandem load wheel, polyurethane (also available in greasable version) | ○ | ○ |
| | Double castor wheel (also available in greasable version) | ● | ● |
| Drive and brake system | Power steering | ● | ● |
| | Maintenance-free AC motor | ● | ● |
| | Electromagnetic braking system (or electromechanic) | ● | ● |
| | Li-ION and lead-acid technology available with different battery capacities depending on the model | ○ | ○ |
| | Integrated charger for lead-acid and Li-ION batteries | ○ | ○ |
| | External chargers available | ○ | ○ |
| Lighting | Working lamp – with on/off switch for operation in dark environments | ○ | ○ |

● Standard equipment

○ Optional equipment

CHARACTERISTICS



Operator remains safe within the chassis contours

Safety

- Solid steel apron around the standing platform protects the operator from injury in the event of collision
- Optimised visibility through the mast for safe load handling
- Dead man's switch and traction control for the highest possible safety in every work situation
- Optional foot detection can also slow down or bring the vehicle to a smooth stop when operator's feet leave the platform
- Automatic braking when cornering to prevent risky operating manoeuvres



Ergonomic, height-adjustable tiller

Ergonomics

- Linde OptiLift assistance system for precise control of mast functions and energy-saving load handling, even at high working speeds
- Electric power steering with adjustable steering resistance for effortless vehicle control in any work situation
- Fully decoupled and suspended operator platform to protect the operator from vibrations and shocks
- Unique design with 45° standing position and innovative steering concept Linde e-driver for optimum all-round vision without straining the back and neck
- Workstation with multifunction display and storage compartments for work utensils and personal items (optional)



Precise handling and easy manoeuvrability

Handling

- High lifting speeds for maximum handling performance
- Ergonomic tiller with all control functions (traction motor, initial stroke, horn, etc.) for effortless vehicle handling
- High residual capacities for efficient and safe stacking and transport of large loads
- Initial lift function for better load handling on slopes, ramps or uneven ground (optional)
- Soft-landing function to protect the load from damage by gently setting down the forks

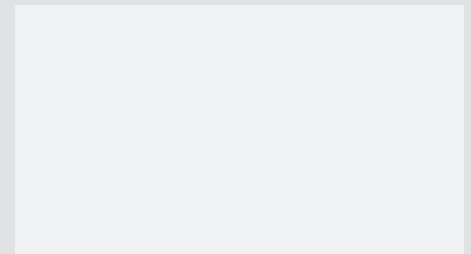


Easy access to all data with multi-function display

Service

- Maintenance-free three-phase motor for long service intervals and permanently low maintenance costs
- Solid construction with durable parts and sturdy chassis for maximum vehicle availability
- Effortless accessibility of all relevant components thanks to consistent design-to-service principle
- Innovative CAN bus architecture for easy access to all vehicle data via diagnostic connector
- Modern E/E architecture allows remote installation of updates and new functions

Presented by:



Subject to modification in the interest of progress. Illustrations and technical details could include options and are not binding for actual constructions. All dimensions subject to usual tolerances.



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